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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,774	08/25/2003	Marc Kenneth Boysworth	0918.0220C	1091
27896	7590	12/28/2004	EXAMINER	
EDEL, SHAPIRO, FINNAN & LYTL, LLC 1901 RESEARCH BOULEVARD SUITE 400 ROCKVILLE, MD 20850			TSAI, CAROL S W	
			ART UNIT	PAPER NUMBER
			2857	

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/646,774	Applicant(s) BOYSWORTH, MARC KENNETH	
	Examiner Carol S Tsai	Art Unit 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-8, 13, 15, 20-27, 32, 34, 39-43, and 46-50 are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent No. 6,625,569 to James et al.

With respect to claims 1, 20, 39, and 46, James et al. disclose a program product apparatus having a computer readable medium with computer program logic recorded thereon for analyzing a set of values, said program product apparatus comprising: (a) a windowing module that defines a plurality of subsets of contiguous values within the set of values (see col. 15, lines 17-20 and col. 19, lines 25-29); (b) an analysis module that determines a measure of variation for each of the plurality of subsets to produce a plurality of measures of variation

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corresponding to the plurality of subsets subsets and (c) an assessment module that categorizes the set of values based upon an analysis of the plurality of measures of variation (see col. 11, line 56 to col. 12, line 17).

As to claims 2, 21, 40, and 47, James et al. also disclose the set of values being a set of measurement values (see col. 50, lines 28-31).

As to claims 3 and 22, James et al. disclose the measurement values being values measured from a communication signal (see col. 3, lines 11-35 and col. 5, lines 27-31).

As to claims 4 and 23, James et al. also disclose the measurement values being values measured from one of an observed substance and an observed event (see col. 3, lines 46-49 and col. 12, lines 58-62).

As to claims 5, 24, 41, and 48, James et al. also disclose the set of values being a set of residual values (see col. 11, lines 64-65).

As to claims 6, 7, 25, and 26, James et al. al. also disclose the residual values being the result of numerical analysis of a communication signal (see col. 13, lines 41-49).

As to claims 8, 27, 42, and 49, James et al. also disclose the set of values being characterized as one of homoscedastic and heteroscedastic (see col. 30, lines 17-36).

As to claims 13 and 32, James et al. also disclose storing the determined measure of variation (see col. 11, lines 47-63).

As to claims 15, 34, 43, and 50, James et al. also categorizing the set of values based upon a difference between a measure of variation determined for one of the plurality of subsets and a measure of variation determined for another one of the plurality of subsets (see col. 22, lines 11-31).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9-12, 14, 28-31, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over James et al. in view of 4,845,500 to Cornett et al.

As noted above, with respect to claims 9-12 and 28-31, James et al. disclose the claimed invention, except for defining a range of values not greater than a number of values within the set of values; and defining a subset of values by positioning the range at a specific position within the set of values.

Cornett et al. teach defining a range of values not greater than a number of values within the set of values; and defining a subset of values by positioning the range at a specific position within the set of values (see col. 2, lines 32-49).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify James et al.'s method to include defining a range of values not greater than a number of values within the set of values; and defining a subset of values by positioning the range at a specific position within the set of values, as taught by Cornett et al., in order to adjust the target window in accordance with target size and weighting the cells within the window (see Abstract, lines 9-11).

As to claims 14 and 33, James et al. do not disclose storing a determined measure of variation in association with a size of the range and a position of the range associated with the subset for which the measure of variation was determined.

Cornett et al. teach storing a determined measure of variation in association with a size of the range and a position of the range associated with the subset for which the measure of variation was determined (see col. 2, lines 50-64).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify James et al.'s method to include storing a determined measure of variation in association with a size of the range and a position of the range associated with the subset for which the measure of variation was determined, as taught by Cornett et al., in order to establish a new stored amplitude for each cell with significantly reduced background noise and clutter (see col. 2, lines 62-64).

5. Claims 16, 35, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over James et al. in view of Wilkes et al.

As noted above, with respect to claims 16, 35, and 44, James et al. disclose the claimed invention, except for categorizing the set of values based upon n-way principal component analysis of the measures of variation determined for the plurality of subsets.

Wilkes et al. teach categorizing the set of values based upon n-way principal component analysis of the measures of variation determined for the plurality of subsets (see paragraph 0031).

It would have been obvious to one having ordinary skill in the art at the time the

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invention was made to modify James et al.'s method to include categorizing the set of values based upon n-way principal component analysis of the measures of variation determined for the plurality of subsets, as taught by Wilkes et al., in order to represent the variation to variation present in many variables using a small number of factors.

6. Claims 17-19, 36-38, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over James et al. in view of U. S. Publication 2003/0171896 to Rao et al.

As noted above, with respect to claims 17-19, 36-38, and 45, James et al. disclose the claimed invention, except for categorizing the set of values based upon visual analysis of a plot of the measures of variation determined for the plurality of subsets.

Rao et al. teach categorizing the set of values based upon visual analysis of a plot of the measures of variation determined for the plurality of subsets (see Figs. 4, 6, 8, and 10-21).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify James et al.'s method to include categorizing the set of values based upon visual analysis of a plot of the measures of variation determined for the plurality of subsets., as taught by Rao et al., in order that measures of variation can be displayed for further analysis.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Heger et al. disclose a method and an apparatus for diagnosis of sensors and/or processes

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through use of Bayesian belief networks.

Gustafson et al. disclose a system and method for generating a multidimensional navigation solution utilizes Global Positioning System (GPS) data to obtain highly reliable and accurate navigational solutions in high interference and dynamic environments, at a performance level which has been heretofore unattainable.

Walker et al. disclose a system that extends a high order polynomial model of an input device into a device region where measured input data is not available by selecting points in an unmeasured region, determining a slope at each of the selected points using a lower order model, and fitting the higher order model to the measured values and the slope values.

Lange discloses an invention being based on the use of the principles of Lange's Fast Kalman-Filtering (FKF.TM.) for large process control, prediction or warning systems where other computing methods are either too slow or fail because of truncation errors.

Rahmatullah et al. disclose a system and method for a GSM receiver to perform channel estimation under the assumption that the analog-to-digital (A/D) converter is free-running.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. W. Tsai whose telephone number is (571) 272-2224. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571) 272-2216. The fax number for TC 2800 is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be

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directed to the TC 2800 receptionist whose telephone number is (571) 272-1585 or (571) 272-
2800.

In order to reduce pendency and avoid potential delays, Group 2800 is encouraging FAXing of responses to Office actions directly into the Group at (703) 872-9306. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2800 will be promptly forwarded to the examiner.



Carol S. W. Tsai
Patent Examiner
Art Unit 2857

12/22/04